

IN THE CLAIMS

The status of each claim of the present application is listed below.

1. (Original): A method for preserving an oxygen infusion comprising an aqueous suspension of molecular assemblies which contain hemoglobin or a heme compound, said method comprising the steps of:

- a) modifying the molecular assemblies with polyoxyethylene; and
- b) converting the hemoglobin or the heme compound into a deoxy-form by removing oxygen from the suspension.

2. (Original): The method of Claim 1, wherein the molecular assemblies are selected from the group consisting of cell membranes, hemoglobin vesicle, lipid heme vesicle, lipid heme-triglyceride microsphere and albumin-lipid heme.

3. (Original): The method of Claim 1, wherein the removal of oxygen is performed by gas exchange with an inert gas.

4. (Original): The method of Claim 1, further comprising:
storing said suspension in an oxygen-impermeable container filled with an inert gas.

5. (Original): The method of Claim 1, wherein the suspension contains a physiologically acceptable reducing agent.

6. (Original): The method of Claim 1, wherein the heme compound comprises a porphyrin ring having a substituent, said compound having reversible oxygen-binding potential.

7. (Original): The method of Claim 1, wherein the molecular assemblies are modified by fixing the polyoxyethylene onto surfaces thereof.

8. (Previously Amended): The method of Claim 7, wherein said polyoxyethylene has a molecular weight of about 1,000 to 20,000 Daltons.

9. (Previously Amended): The method of Claim 7, wherein the molecular assemblies comprise lipid and said polyoxyethylene is present in an amount of about 0.01 to 3 mol% with respect to a total amount of lipid exposed on an outer surface of each particle of the molecular assemblies.

10. (Original) The method of Claim 7, wherein the polyoxyethylene is fixed into the surface of the molecular assemblies by a hydrophobic moiety of the components of molecular assembly.

11. (Previously Presented) The method of Claim 10, wherein the hydrophobic moiety comprises at least one amphipathic molecule selected from the group consisting of ethanolamine phospholipid, cholesterol, alkyl-chain-linked glutamic acid and alkyl-chain-linked lysine.

12. (Original): The method of Claim 11, wherein the polyoxyethylene is N-(monomethoxypolyoxyethylene carbamyl)distearoyl phosphatidyl-ethanolamine.

13. (Original): The method of Claim 1, wherein said oxygen infusion exhibits no loss of oxygen transport function after storage at 40°C for six months.

14. (Original): The method of Claim 1, which further comprises after step b), storing said oxygen infusion under nitrogen.

15. (Original): The method of Claim 14, wherein said oxygen infusion exhibits no loss of oxygen transport function after storage at 23°C under nitrogen for one year.

16. (Previously Presented): A method of producing an oxygen infusion comprising an aqueous suspension of molecular assemblies which contain hemoglobin or a heme compound, said method comprising the steps of:

a) preparing a suspension of the molecular assembly containing the hemoglobin or the heme compound, the molecular assembly being modified with polyoxyethylene;

b) making the hemoglobin or the heme compound into a deoxy-form by removing oxygen from the suspension; and

c) packing the suspension containing the deoxy-form hemoglobin or heme compound, in an oxygen-impermeable container which is filled with an inert gas.

17. (Previously Presented): An oxygen infusion, comprising a suspension of molecular assemblies comprising hemoglobin or a heme compound, the assemblies being modified with polyoxyethylene; said hemoglobin or heme compound being in a deoxy-form.

18. (Previously Presented): The oxygen infusion of Claim 17, wherein said molecular assemblies are modified by having said polyoxyethylene fixed onto surfaces thereof.

19. (Previously Amended): The oxygen infusion of Claim 17, wherein said polyoxyethylene has a molecular weight of about 1,000 to 20,000 Daltons.

20. (Currently Amended): The oxygen infusion of Claim 18, wherein the molecular assemblies comprise lipid and said polyoxyethylene is present in an amount of about 0.01 to 3 mol% with respect to a total amount of lipid exposed on an outer surface of each particle of the molecular assemblies.

21. (Original): The oxygen infusion of Claim 17, wherein the molecular assemblies are cell membranes.

22. (Original): The oxygen infusion of Claim 17, wherein the molecular assemblies are hemoglobin vesicles.

23. (Original): The oxygen infusion of Claim 17, wherein the molecular assemblies are lipid heme vesicles.

24. (Original): The oxygen infusion of Claim 17, wherein the molecular assemblies are lipid heme-triglyceride microspheres.

25. (Original): The oxygen infusion of Claim 17, wherein the molecular assemblies are albumin-lipid heme.

26. (Original): The oxygen infusion of Claim 17, which is stored in a container.

27. (Original): The oxygen infusion of Claim 26, wherein the container is a bottle.

28. (Original): The oxygen infusion of Claim 26, which is stored under an inert gas atmosphere.

Application No. 10/091,440
Reply to Office Action of July 20, 2004

SUPPORT FOR THE AMENDMENTS

The specification has been amended to insert the word "Daltons" and to replace the Abstract in accordance with the Examiner's suggestion. Claim 20 has been amended to recite lipid. No new matter is believed to have been added to the present application by the amendments submitted above.